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U.S. Department of Energy
Oak Ridge Operations Office
and
Bechtel Jacobs Company LLC

**Authorization Agreement and
Radioactive Waste Management Basis**

for

**Paducah Gaseous Diffusion Plant
Department of Energy Material Storage Areas**

March 2001

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Section 1 Scope of Operations

This Authorization Agreement and Radioactive Waste Management Basis (AA/RWMB) applies to the Paducah Gaseous Diffusion Plant (PGDP) U.S. Department of Energy (DOE) Material Storage Areas (DMSAs). The areas are classified as Nuclear Category 2 in accordance with DOE STD 1027-92 and as “Radiological” in accordance with DOE STD 5502-94, and major functions and areas are described in detail in the PGDP Safety Analysis Report (SAR), as amended.

The scope of activities authorized in conjunction with the operation of the DMSAs is defined by (a) the Work Authorization and Change Control process specified in Bechtel Jacobs Company LLC (BJC) Management and Integration (M&I) Contract Number DE-AC05-98OR22700, (b) the Authorization Basis (AB) documents listed in Section 7 of the associated RWMB Datasheets, and (c) the attached RWMB datasheet references (Appendix 1). Scope defining documents (except M&I Contract Number DE-AC05-98OR22700) and references are subject to the provisions of Sections (4) Terms and Conditions, (6) Special Conditions, and (9) Exceptions, as specified in this Agreement.

A brief summary of the authorized operations of the DMSAs is provided:

Authorized operations in DMSAs include routine monitoring, surveillance and maintenance, as well as storage, characterization, remediation, and disposition of DMSA materials that are either contaminated, or potentially contaminated with radioactivity, or contain uranium-bearing material. These areas are divided into three groups: Phase 1 DMSAs are those that contain scrap material with no expected fissionable material, Phase 2 DMSAs are those that potentially have fissionable material, and Phase 3 DMSAs are fully characterized and contain no fissionable material.

Section 2 DOE Basis for Approval

The DOE has determined:

- A. Through a series of comprehensive reviews, the **DMSAs** will be operated in compliance with the AB documents, as amended, Environmental Management and Enrichment Facilities Work Smart Standards (WSS), BJC/OR-64, as amended, and this AA/RWMB, as specified by M&I Contract Number DE-AC05-98OR22700. The AB documents and WSS have separate review and approval processes and may be amended without need to revise and re-approve this AA/RWMB unless the authorized work scope is significantly modified.
- B. Through review and approval of the BJC Integrated Safety Management System Description, BJC/OR-87, as amended, BJC has committed to conduct and manage work safely. BJC M&I Contract Number DE-AC05-98OR22700 requires implementation of all principles and functions of integrated safety management involving workers at all levels, including the following: defining the scope of work at the

Paducah Project DMSAs, analysis of hazards and derivation of prevention and mitigation controls, initiation of work per approved plans only after determination that work may be safely performed, and feedback for continuous improvement. Also the safety management program, which affords an acceptable level of safety to the public, the workers, and the environment, has been defined and documented by the set of AB documents, as amended, listed in Section 7 of the RWMB Datasheets. This AA/RWMB serves to document DOE approval of the set of AB documents tailored for the subject DMSAs and that this set of documents adequately represents the AB for the DMSAs.

- C. Operation and modification of the DMSAs has been categorically excluded from further National Environmental Policy Act of 1969 review (CX-PAD-98-1). This categorical exclusion documents that the activities have been reviewed and are included in a category of activities previously evaluated and determined to have no significant adverse effect on human health and the environment.
- D. The Paducah Waste Acceptance Criteria (WAC), BJC/PAD-11, latest revision, defines the packaging, labeling, marking characterization, and documentation requirements for newly generated waste accepted within the facilities. The WAC has a separate review and approval process and may be amended without need to revise and re-approve this AA/RWMB unless the authorized work scope is significantly modified.

Section 3 Authorization Basis Documents

The AB documents for each of the Paducah DMSAs are specified on the attached RWMB Datasheets.

Section 4 Terms and Conditions

Operation of the DMSAs is subject to the following requirements and conditions:

- A. In accordance with M&I Contract Number DE-AC05-98OR22700, the WSS identify the rules, regulations, orders, standards, and directives of DOE and other federal, state, or local agencies that are to be applied under the Contract to the activities associated with the DMSAs. Authorized deviations shall be documented by BJC and approved by DOE through Exemption Requests, Compliance Schedule Agreements, Implementation Plans, or modification of the WSS, as appropriate. New or revised requirements shall be incorporated into the WSS as agreed by DOE and BJC using the WSS change process. BJC shall ensure compliance commitments are tracked and completed within established timeframes.
- B. BJC shall assure that each DMSA is operated in accordance with operational controls specified in the AB as defined in the controlling set of AB documents listed in Section 7 of the associated RWMB Datasheet and subject to the provisions of Sections 6 and 9 of this AA/RWMB. BJC Safety Management Programs shall be implemented in place of the previously approved AB-referenced Safety Management Programs (e.g., LMES).
- C. BJC shall comply with applicable requirements specified in the following Standards/Requirements Identification Documents (S/RID): (1) Emergency Management S/RID Functional Area (Section 5) and (2) Occurrence Reporting element of S/RID Functional Area (Subsection 1.6).
- D. BJC shall maintain the AB (or other defined safety controls) via an appropriate Unreviewed Safety Question Determination process as required by WSS. Changes in the AB documents do not require revisions to the AA/RWMB unless the facility's authorized work scope is significantly modified.

- E. BJC shall implement and maintain a facility Emergency Preparedness and Planning Program, for the PGDP DMSAs covered by this AAIRWMB, as described in *Paducah Gaseous Diffusion Plant Emergency Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, latest approved revision.
- F. BJC shall implement and maintain in effect a facility Fire Protection Program, for the PGDP DMSAs covered by this AA/RWMB, as described in the PGDP SAR.
- G. BJC shall comply with applicable provisions of the Uranium Enrichment Toxic Substances Control Act of 1976 Federal Facility Compliance Agreement Between the DOE and U.S. Environmental Protection Agency, Federal Facility Compliance Agreement, latest approved revision and concurrences,
- H. BJC shall comply with applicable site-wide requirements approved or endorsed by DOE as specified in the following leased facility documents.
 - 1. DOE/USEC 1996, USEC and DOE Resolution of Shared Site Issues at the Gaseous Diffusion Plants, concurred by Joe W. Parks, Assistant Manager for Enrichment Facilities, DOE, and George P. Rifakes, Executive Vice President of USEC, January, latest approved revision
 - 2. DOE/USEC 1993, Lease Agreement between the DOE and the USEC, latest approved revision
- I. A “significant” modification to work scope is defined as a change to information contained in an AA, AAIRWMB, or RWMB, typified by examples in BJC Procedure BJC-NS-1015, *Generation, Review, Approval and Control of Authorization Agreements and Radioactive Waste Management Bases*, effective revision, and upon which both DOE and BJC agree a revision to the AA, AAIRWMB, or RWMB is required. In the event agreement is not reached, the DOE position shall prevail.

Section 5 Contractor and Subcontractor Qualifications

Through DOE’s adherence to Federal Acquisition Regulations (FARs), DOE Acquisition Regulations (DEARs) regarding selection of competent contractors, as well as BJC commitment to WSS requirements for personnel selection, training, and qualification, DOE is assured that BJC is technically qualified to engage in the activities authorized by this AA/RWMB. Activities in the DMSAs are subcontracted on an as-required basis by BJC. Additionally, through DOE evaluation of the BJC procurement process and of qualified bidders for BJC-subcontracted work through program-oriented reviews, presentations, and assessments, DOE has concluded that BJC has demonstrated ability to safely perform and/or manage performance of the scope of work specified in this AA/RWMB. Effective BJC oversight of subcontracted work is assured through implementation of BJC Procedures, BJC-FS-1010 through 1013, effective revisions, which define requirements of the BJC Subcontract Technical Representative Program.

Section 6 Special Conditions

- A. BJC shall comply with the provisions of the agreement except for reasonable action taken in an emergency, when such action is needed to protect the environment, and/or the safety and health of the public and/or worker, and it is not immediately apparent to BJC that action consistent with this agreement would provide adequate protection.
- B. In the event that a condition(s) is discovered that is determined by BJC to be outside of the scope of hazards analyzed in the **AB**, and which if uncorrected would lead to unsafe conditions, the following general requirements apply (Emergency Response and 6. A. above notwithstanding):

AA/R-00-035-PAD: DMSA

- Work shall be suspended, except for such actions that may be promptly and safely completed to minimize or eliminate the unsafe condition(s).
- The condition shall be immediately reported to BJC and DOE management for determination of further responsive action, cause, corrective action, and reporting responsibilities.
- Work shall not proceed in the affected area until BJC determines that work may be safely performed and that the condition(s) is within the analytical bounds of the AB.

Section 7 Effective and Expiration Dates

The conditions and limitations within this AA/RWMB are effective upon the latest date of signature by all parties and shall expire upon expiration or termination of M&I Contract Number DE-AC05-98OR22700. This AA/RWMB shall be reviewed on a periodicity coinciding with that of the PGDP SAR. Results of the review of the AA/RWMB shall be reported to DOE and the AA/RWMB revised as needed. However, failure to complete the review as scheduled does not render this agreement void.

Section 8 Contractual Citation and Approval Signatures:

DOE and BJC agree to all of the provisions of this AA/RWMB subject to the conditions specified in Contract Number DE-AC05-98OR22700, between BJC and DOE. Signatures below constitute approval of associated RWMB Datasheets, and only RWMB Datasheets added to or deleted from this AA/RWMB between revisions must be individually signed.

DM Mashev
David M. Mashev, D&D/DMSA Project Manager
Bechtel Jacobs Company LLC

4/30/01
Date

John T. Dover
John T. Dover, Manager of Paducah Project,
Bechtel Jacobs Company LLC

5/2/01
Date

Paul F. Clay
Paul F. Clay, Vice President & General Manager,
Bechtel Jacobs Company LLC

5/9/01
Date

W. Don Seaborg, DOE Paducah Site Manager

Date

Rodney R. Nelson, Assistant Manager
for Environmental Management, Oak Ridge Operations Office

Date

- Work shall be suspended, except for such actions that may be promptly and safely completed to minimize or eliminate the unsafe condition(s).
- The condition shall be immediately reported to BJC and DOE management for determination of further responsive action, cause, corrective action, and reporting responsibilities.
- Work shall not proceed in the affected area until BJC determines that work may be safely performed and that the condition(s) is within the analytical bounds of the AB.

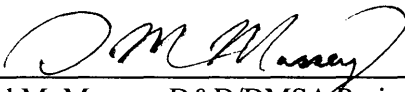
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DK
4/30/01



David M. Massey, D&D/DMSA Project Manager,
Bechtel Jacobs Company LLC

4/30/01

Date



Gordon L. Dover, Manager of Paducah Project,
Bechtel Jacobs Company LLC

5/2/01

Date

Paul F. Clay, Vice President & General Manager,
Bechtel Jacobs Company LLC

Date

W. Don Seaborg, DOE Paducah Site Manager

Date

Rodney R. Nelson, Assistant Manager
for Environmental Management, Oak Ridge Operations Office

Date

Section 9 Exceptions

- A. Should the provisions of this AA/RWMB appear to conflict with the provisions of M&I Contract Number DE-AC05-98OR22700, the Contracts shall be the governing documents pending the resolution of the apparent conflict.

Radioactive Waste Management Basis Datasheets

Table of Contents

<u>RWMB #</u>	<u>Facility Identification</u>
1018	Phase 1 DMSAs
1019	Phase 2 DMSAs
1023	Phase 3 DMSAs

Radioactive Waste Management Basis

RWMB # 1018

1. Site	Paducah	Project <input checked="" type="checkbox"/> Legacy <input type="checkbox"/> Operations
2. Company	Bechtel Jacobs Company LLC	
3. Subcontractor	WESKEM	
5. Facility Name	Phase 1 DMSAs	<input type="checkbox"/> Treat <input type="checkbox"/> Dispose <input checked="" type="checkbox"/> Store
6. Facility Description	These DOE Material Storage Areas (DMSA) contain a wide variety of materials. In 1997 LMES undertook an effort to visually examine and identify potential Nuclear Criticality Safety (NCS) hazards in these DMSAs. Based on the process knowledge for the materials observed in these DMSAs, it was determined by LMES that these DMSAs did not have the potential to contain fissile materials. Characterization for hazards other than fissile material may still be required. The location and characterization priority of the DMSAs are provided in BJC/PAD-186.	

7. Safety Authorization Basis Document

KY/EM-174 Safety Analysis Report

8. Waste Acceptance Criteria

BJC/PAD-11, Latest Revision, Waste Acceptance Criteria for DOE Treatment, Storage and Disposal Units at Paducah Gaseous Diffusion Plant, Paducah, KY

9. Closure Plan

BJC/PAD-186, Latest Revision, Paducah Gaseous Diffusion Plant Department of Energy Material Storage Area Characterization/Remediation Plan.

10. Permits/Disposal Authorization Statement (as applicable)

None

11. Environmental Monitoring Plans (other than site wide)

None are required.

12. Other Governing Documents (e.g. Nuclear Criticality Safety Assessment)

BJC/OR-087 Integrated Safety Management System; BJC/OR-146 Integrated Safety Management Supplement; FS-A-0001 Work Control Requirements; and W-321-PWOS Work Control Requirements.

Wednesday, April 25, 2001

Radioactive Waste Management Basis

RWMB # 1019

1. **Site** Paducah **Project** ☒ Legacy
2. **Company** Bechtel Jacobs Company LLC ☐ Operations
3. **Subcontractor** WESKEM
5. **Facility Name** Phase 2 DMSAs ☐ Trent ☐ Dispose ☒ Store

6. **Facility Description** These DOE Material Storage Areas (DMSA) contain a wide variety of materials. In 1997 LMES undertook an effort to visually examine and identify potential Nuclear Criticality Safety (NCS) hazards in these DMSAs. Based on the process knowledge for the materials observed in these DMSAs, it was determined by LMES that these DMSAs have the potential to contain fissile materials. Characterization for hazards other than fissile material may still be required. The location and characterization priority of the DMSAs are provided in BJC/PAD-186, Latest Revision.

7. Safety Authorization Basis Document

KY/EM-174 Safety Analysis Report;
KY/EM-175 Technical Safety Requirements,
DOE-SER USQDEM&EF 98-078

8. Waste Acceptance Criteria

BJC/PAD-11, Latest Revision, Waste Acceptance Criteria for DOE Treatment, Storage and Disposal Units at Paducah Gaseous Diffusion Plant, Paducah, KY

9. Closure Plan

BJC/PAD-186, Latest Revision, Paducah Gaseous Diffusion Plant Department of Energy Material Storage Area Characterization/Remediation Plan.

10. Permits/Disposal Authorization Statement (us applicable)

None

11. Environmental Monitoring Plans (other than site wide)

None are required.

12. Other Governing Documents (e.g. Nuclear Criticality Safety Assessment)

BJC/OR-087 Integrated Safety Management System; BJC/OR-146 Integrated Safety Management Supplement; FS-A-0001 Work Control Requirements; and W-321-PWOS Work Control Requirements.

Wednesday, April 25, 2001

Radioactive Waste Management Basis

RWMB # 4023

1. **Site** Paducah
2. **Company** Bechtel Jacobs Company LLC
3. **Subcontractor** WESKEM
5. **Facility Name** Phase 3 DMSAs ☐ Trent ☐ Dispose ☒ Store

Project ☒ Legacy ☐ Operations

6. **Facility Description** These DOE Material Storage Areas (DMSA) contain a wide variety of materials. In 1997 LMES undertook an effort to visually examine and identify potential Nuclear Criticality Safety (NCS) hazards in these DMSAs. Based on these inspections, some DMSAs were identified to have potential NCS concerns and some were identified to not have NCS concerns. As activities began to completely characterize DMSAs for NCS purposes, a third category of DMSA was created. Phase 3 DMSAs have been fully characterized for NCS purposes and contain no fissile material as documented per the Characterization/Remediation Plan referenced below. Characterization for hazards other than fissile material may still be required. The location and characterization priority of the DMSAs are provided in BJC/PAD-186.

7. Safety Authorization Basis Document

KY/EM-174 Safety Analysis Report

8. Waste Acceptance Criteria

BJC/PAD-11, Latest Revision, Waste Acceptance Criteria for DOE Treatment, Storage and Disposal Units at Paducah Gaseous Diffusion Plant, Paducah, KY

9. Closure Plan

BJC/PAD-186, Latest Revision, Paducah Gaseous Diffusion Plant Department of Energy Material Storage Area Characterization/Remediation Plan.

10. Permits/Disposal Authorization Statement (as applicable)

None

11. Environmental Monitoring Plans (other than site wide)

None are required

12. Other Governing Documents (e.g. Nuclear Criticality Safety Assessment)

BJC/OR-087 Integrated Safety Management System; BJC/OR-146 Integrated Safety Management Supplement; FS-A-0001 Work Control Requirements; and W-321-PWOS Work Control Requirements.

Wednesday, April 25, 2001